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wherein said first and second semiconductor wafers are bonded with crystal orientations shifted from each other.

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully request.

Claims 1-10 are presently active in this case. Claims 1 and 8 have been amended by way of the present amendment.

First, applicants acknowledge with appreciation the courtesy of an interview granted to Applicant's attorney on May 22, 2002 at which time the subject matter of the invention was explained in light of Applicant's disclosure, the outstanding issues were discussed, and arguments substantially as hereinafter developed were presented. No agreement was reached, however, pending the Examiner's detailed reconsideration upon formal submission of a response to the outstanding Official Action.

In the outstanding Office Action, Figs. 17-21 were objected to for not being designated as prior art; Claims 1, 4, and 5-8 were rejected under 35 USC 103(a) as being unpatentable over "figures 17-21 of the acknowledged prior art (APA)" in view of U.S. patent No. 5,060,043 to Yasue; Claims 2 and 9 were rejected under 35 USC 103(a) as being unpatentable over (APA) and Yasue further in view of Japanese patent application 9-246505; and Claims 3 and 10 were rejected under 35 USC 103(a) as being unpatentable over (APA) and Yasue further in view of Sayama et al.

In response to the objection to figures 17-21, submitted herewith is a separate letter requesting approval for drawing changes. The drawing will be changed to designate figures 17-21 as prior art. No further objection on this basis is therefore anticipated.

Before discussing the several grounds for rejection on the merits, it is believed that a brief review of the present invention would be helpful. The present invention provides a semiconductor wafer including first and second semiconductor wafers having crystal orientation display sections indicative of crystal orientations formed thereon. Claim 1 provides that the first and second semiconductor wafers are bonded with the crystal orientation display sections shifted from one another. Likewise, Claim 8 provides that the first and second semiconductor wafers have bulk structures and that the first and second semiconductor wafers are bonded with the crystal orientations shifted from one another. Finally, Claim 5 provides printing, which is provided on an exposed part of the main surface of the semiconductor wafer.

The Official Action states with regard to Claim 1 that the (APA) discloses a semiconductor wafer comprising first and second semiconductor wafers having crystal orientation display sections and that Yasue discloses nicks indicative of orientation formed on the fringe of a semiconductor wafer. However, the office action is silent regarding whether either the (APA) or Yasue teach or suggest the "shifting" limitation provided by claim 1. Applicant submit that neither the (APA) or Yasue teach or suggest such a feature. Moreover, Yasue is directed to a single semiconductor wafer and thus does not teach or suggest a semiconductor wafer including bonded first and second semiconductor wafers. Finally, neither the (APA) nor Yasue provides a motivation to combine the disclosed structures. Consequently, the (APA) is not believed to anticipate or render obvious the claimed invention (Claim 1) when considered alone or in combination with Yasue.

Regarding Claim 8, the Official Action asserts that Yasue discloses in Figure 1 first and second wafers having their crystal orientations shifted from one another. Applicants respectfully traverse that assertion. Yasue is directed to a single semiconductor wafer having a mark indicating a specified crystal orientation. Yasue does not teach a semiconductor wafer

comprising first and second semiconductor wafers and thus does not teach or suggest that first and second semiconductor wafers are bonded with crystal orientations shifted from one another. Moreover, the (APA) and Yasue fail to disclose or suggest the "shifting" limitation of the crystal orientation display sections. Finally, Applicants note that the (APA) is directed to an SOI structure, not a bulk structure comprising two bonded semiconductor wafers. Consequently, the (APA) is not believe to anticipate or render obvious the claimed invention (Claim 8) when considered alone or in combination with Yasue.

Claim 5 provides that printing is provided on the exposed part of the main surface of the first semiconductor wafer. Applicants respectfully submit that none of the applied patents and/or publications teach or suggest singly or in combination the invention defined by Claim 5.

In light of the above discussion, it is respectfully submitted that claims 1, 5, and 8 are patentably distinguishable from the applied patents and publications, and the dependent claims 2-4, 6, 7, 9, and 10 are therefore also patentably distinguishable from the applied patents and/or publications.

Consequently, in view of the present amendment, no further issues are believed to outstanding in the present application, and the present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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IN THE CLAIMS

Please amend claims 1 and 8 as follows.

1. (Amended) A semiconductor wafer comprising:

first and second semiconductor wafers having crystal orientation display sections to be nicks indicative of crystal orientations formed on fringes thereof,

wherein said crystal orientation display sections are indicative of an identical crystal orientation in said first and second semiconductor wafers, and

said first and second semiconductor wafers are bonded with said crystal orientation display sections shifted from each other.

8. (Amended) A semiconductor wafer comprising:

first and second semiconductor wafers having bulk structures,

wherein said first and second semiconductor wafers are bonded with crystal orientations shifted from each other.